

Response
Serial No. 10/694,984
Attorney Docket No. 032067

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims

Claim 1 (currently amended): A method for fabricating a semiconductor device comprising the steps of:

- forming a ~~first insulation~~ silicon nitride film over a semiconductor substrate;
- forming a semiconductor film ~~[[over]]~~ on the ~~first insulation~~ silicon nitride film;
- forming a resist film over the semiconductor film;
- forming openings in the resist film;
- etching the semiconductor film with the resist film as a mask;
- etching the ~~first insulation~~ silicon nitride film with the semiconductor film as a mask; and
- etching the semiconductor substrate with the ~~first insulation~~ silicon nitride film as a mask to form trenches in the semiconductor substrate.

Claim 2 (currently amended): A method for fabricating a semiconductor device according to claim 1,

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which further comprises, after the step of forming the trenches in the semiconductor substrate, the step of burying element isolation regions of ~~a second~~ an insulation film in the trenches.

Claim 3 (currently amended): A method for fabricating a semiconductor device according to claim 1, wherein

in the step of forming trenches in the semiconductor substrate, the trenches are formed in the semiconductor substrate and etching off the semiconductor film over the ~~first insulation~~ silicon nitride film.

Claim 4 (currently amended): A method for fabricating a semiconductor device according to claim 2, wherein

in the step of forming trenches in the semiconductor substrate, the trenches are formed in the semiconductor substrate and etching off the semiconductor film over the ~~first insulation~~ silicon nitride film.

Claim 5 (currently amended): A method for fabricating a semiconductor device according to claim 1, wherein

the step of etching the semiconductor film and the step of ~~etching~~ etching the ~~first insulation~~ silicon nitride film are performed without the exposure to the atmosphere.

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Claim 6 (currently amended): A method for fabricating a semiconductor device according to claim 2, wherein

the step of etching the semiconductor film and the step of ~~etching~~ etching the ~~first insulation~~ silicon nitride film are performed without the exposure to the atmosphere.

Claim 7 (currently amended): A method for fabricating a semiconductor device according to claim 5, wherein

the step of etching the semiconductor film and the step of etching the ~~first insulation~~ silicon nitride film are performed in one and the same chamber.

Claim 8 (currently amended): A method for fabricating a semiconductor device according to claim 6, wherein

the step of etching the semiconductor film and the step of etching the ~~first insulation~~ silicon nitride film are performed in one and the same chamber.

Claim 9 (currently amended): A method for fabricating a semiconductor device according to claim 5,

which further comprises, after the step of forming a semiconductor film and before the step of forming a resist film, the step of forming an anti-reflection film, and

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in which the step of etching the anti-reflection film to the step of etching the ~~first insulation~~ silicon nitride film including the ~~first insulation~~ silicon nitride film etching step are performed without exposure to the atmosphere.

Claim 10 (currently amended): A method for fabricating a semiconductor device according to claim 6,

which further comprises, after the step of forming a semiconductor film and before the step of forming a resist film, the step of forming an anti-reflection film, and

in which the step of etching the anti-reflection film to the step of etching the ~~first insulation~~ silicon nitride film including the ~~first insulation~~ silicon nitride film etching step are performed without exposure to the atmosphere.

Claim 11 (currently amended): A method for fabricating a semiconductor device according to claim 9, wherein

the step of etching the anti-reflection film to the step of etching the ~~first insulation~~ silicon nitride film including the ~~first insulation~~ silicon nitride film etching step are performed in one and the same chamber.

Claim 12 (currently amended): A method for fabricating a semiconductor device according to claim 10, wherein

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the step of etching the anti-reflection film to the step of etching the ~~first insulation~~ silicon nitride film including the ~~first insulation~~ silicon nitride film etching step are performed in one and the same chamber.

Claim 13 (currently amended): A method for fabricating a semiconductor device according to claim 1,

which further comprises, after the step of etching the ~~first insulation~~ silicon nitride film and before the step of forming the trenches in the semiconductor substrate, the step of removing the resist film.

Claim 14 (currently amended): A method for fabricating a semiconductor device according to claim 2,

which further comprises, after the step of etching the ~~first insulation~~ silicon nitride film and before the step of forming the trenches in the semiconductor substrate, the step of removing the resist film.

Claim 15 (currently amended): A method for fabricating a semiconductor device according to claim 1,

which further comprises, after the step of etching the semiconductor film and before the step of etching the ~~first insulation~~ silicon nitride film, the step of removing the resist film.

Claim 16 (currently amended): A method for fabricating a semiconductor device according to claim 2,

which further comprises, after the step of etching the semiconductor film and before the step of etching the ~~first insulation~~ silicon nitride film, the step of removing the resist film.

Claim 17 (currently amended): A method for fabricating a semiconductor device according to claim 2, wherein

the step of burying the element isolation regions comprises the step of forming the ~~second~~ insulation film in the trenches and on the ~~first insulation~~ silicon nitride film and the step of polishing the ~~second~~ insulation film until the ~~first insulation~~ silicon nitride film is exposed.

Claim 18 (currently amended): A method for fabricating a semiconductor device according to claim 1, which further comprises, after the step of forming element isolation regions, the steps of:

etching off the ~~first insulation~~ silicon nitride film; and

forming a gate insulation film over the semiconductor substrate.

Claim 19 (original): A method for fabricating a semiconductor device according to claim 1, wherein

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the semiconductor film is a polysilicon film or an amorphous silicon film.

Claim 20 (currently amended): A method for fabricating a semiconductor device according to claim 2, wherein

~~the first insulation film is a silicon nitride film; and~~

the ~~second~~ insulation film is a silicon oxide film.